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AMENDMENTS TO CLAIMS

1.(Currently amended): A method for implementing an application programming interface through a client, comprising the computer implemented steps of:

acquiring models for at least two vehicle network classes from a group including any vehicle class;

responsive to acquisition of a the models for the vehicle network classes, detecting a physical network of one of the vehicle network classes and returning an object to the client represented by a pointer to the physical network;

making the client an active member of the physical network;

broadcasting a raw message from the client over the physical network as part of detecting all devices active on the physical network; and

providing a database of manufacturer devices to establish a syntax giving meaning to data values transmitted to and received from devices.

2.(original): The method of claim 1, further comprising the computer implemented steps of:

supplying a set of traffic managers allowing detection of and filtering of network messages.

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3.(previously amended): The method of claim 2, further comprising the computer implemented steps of:

responsive to a client request, transmitting a data request directed to a device active on the physical network;

responsive to a particular data request from the client, making a synchronous request for the particular data from a device;

obtaining values from devices indicating changes in state;

responsive to a client request, sending specified data values to devices; and

responsive to a client request, periodically sending a data value to a device.

4.(original): The method of claim 3, further comprising the computer implemented steps of:

enumerating all physical devices previously detected on the physical network; and

responsive to client specified filtering criteria, obtaining network messages corresponding to the filtering criteria.

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5.(currently amended): A computer implemented translation system between a client and remote devices connected to a physical network for a vehicle, the system comprising:

a plurality of software objects including:

a network interface incorporating a plurality of functions representing models of a plurality of network from a group including any vehicle class;

a datalink interface responsive to client requests for acquiring a network instance corresponding both to a physical network and to one of the network classes from the network interface; and

a remote device interface incorporating a plurality of functions representing a models for physical devices installable on a vehicle, the remote device interface being callable through the network interface for handling messages moving between the client and a physical device.

6.(previously amended): A computer implemented translation system as claimed in Claim 5, further comprising a common programming interface supported by the datalink interface.

7.(original): A computer implemented translation system as claimed in Claim 6, further comprising:

a device detection interface called from the network interface and which includes a function for indicating to the client that a remote device has been detected in response to a previously commenced device detection operation, and a detection completed function for indicating to the client that a device detection operation has been completed.

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8.(original): A computer implemented translation system as claimed in Claim 7, further comprising:

a raw message traffic notification interface which issues a call to a client upon receipt of message traffic from the vehicle network.

9.(original): A computer implemented translation system as claimed in Claim 8, further comprising:

an interface for notifying a client of receipt of a data value when the client is registered for the data value.

10.(original): A computer implemented translation system as claimed in Claim 9, further comprising:

an interface for notifying a client of receipt of a change of state data value for a value associated with a remote device.

11.(original): A computer implemented translation system as claimed in Claim 10, further comprising:

an interface for relating to a client about status for changed data values.

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12.(original): A computer implemented translation system as claimed in Claim 11, wherein the data links interface further comprises:

a function for returning an instance of the network interface and providing unique identification to the instance making the network available to the client;

an enumeration function for determining all networks currently available to the client.

13.(previously amended): A computer implemented translation system as claimed in Claim 12, wherein the network interface further includes:

a connection function for establishing communication with a physical network, represented by a network instance to the client;

a device detection function allowing the client to determine which physical devices are connected to the physical network represented by a network instance;

a function for disconnecting the client and the physical network;

an enumerate devices function for returning a set of all physical devices detected on the physical network the last time the device detection function was called;

a function for obtaining a physical address for the physical network;

a function for obtaining an adaptor name for the physical network;

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- a function for obtaining a baud rate for the physical network;
- a function responsive to a client request for returning the time of last operation for the device detection function;
- a function for obtaining a network class from a defined set of possible network classes;
- a function for returning the number of detected devices at the time of the last operation of the device detection function;
- a raw message traffic register function responsive to client requests to obtain messages corresponding to filtering criteria specified by the client in the function;
- a function for unregistering a prior registration for raw message traffic using the raw message traffic register function; and
- a transmit raw message function responsive to client requests.

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14.(original): A computer implemented translation system as claimed in Claim 13, wherein the remote device interface further includes:

a data value receive register function responsive to client request for broadcasting a data request to a remote device and a way of notifying a client that the requested data is being returned;

a data value receive function responsive to a client request for making a synchronous request of a particular data value from a remote device;

a function for unregistering a request formed using the data value receive register function;

a change of state data value receive register function responsive to user requests for obtaining a change in state status for a particular data value from a particular remote device;

a function for unregistering a registered request for a change of state;

a data value transmit function responsive to client requests for sending a particular data value to a particular remote device;

a registration function for periodic transmission of data values responsive to client requests to send a particular data value to a particular remote device on a periodic basis specified by the client;

an unregistration function for cancelling periodic transmissions of data values;

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a function for obtaining remote device addresses;

a function for obtaining a function code for a remote device which then serves as part of the remote device's name; and

a function for obtaining an electronic control unit instance for a remote device which then serves as part of the identification of the remote device.

15.(original): A computer implemented translation system as claimed in Claim 14, wherein the remote device interface further includes:

a function for obtaining an industry group for a remote device;

a function for obtaining a vehicle system instance code for a remote device;

a function for obtaining a vehicle system code for a remote device; and

a function for obtaining a manufacturer code for a remote device, by which a database of remote device properties may be accessed for variables used in calls to the remote device.

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16.(currently amended): An application programming interface for a plurality of vehicle network types, comprising:

a client;

a data link interface responsive to the client for acquiring a plurality of network type models from a group including any vehicle class and identifying a physical vehicle network, said identification including the network type model;

a network interface responsive to a request from the data link interface for initiating a communication link between the physical vehicle network and the client which includes identification of the devices connected to the physical vehicle network;

a remote device interface responsive to requests from the network interface for translating data values to and from formats usable by the client and the physical vehicle network; and

a data traffic management facility monitoring the network interface, the remote device interface and the physical network to provide indication of message traffic, message identification and transmission.

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17.(previously amended): An application programming interface as claimed in Claim 16, wherein the network interface implements a plurality of software functions, including:

a function for obtaining a class designation for a network type model;

a function for implementing a network type specific connection between the client and the physical vehicle network in response to a request by the client including the class designation for the physical vehicle network; and

a function detecting devices active on the physical vehicle network.

18.(original): An application programming interface as claimed in Claim 17, wherein the remote device interface further comprises:

a data value receive register function responsive to client request for broadcasting a data request to a remote device and a way of notifying a client that the requested data is being returned;

a data value receive function responsive to a client request for making a synchronous request of a particular data value from a remote device;

a function for unregistering a request formed using the data value receive register function;

a change of state data value receive register function responsive to user requests for obtaining a change in state status for a particular data value from a

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- particular remote device;
- a function for unregistering a registered request for a change of state;
- a data value transmit function responsive to client requests for sending a particular data value to a particular remote device;
- a registration function for periodic transmission of data values responsive to client requests to send a particular data value to a particular remote device on a periodic basis specified by the client;
- an unregistration function for cancelling periodic transmissions of data values;
- a function for obtaining remote device addresses;
- a function for obtaining a function code for a remote device which then serves as part of the remote device's name; and
- a function for obtaining a unit instance for a remote device which then serves as part of the identification of the remote device.

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19.(previously amended): A application programming interface as claimed in Claim 18, wherein the network interface further comprises:

- a function for disconnecting the client and the physical vehicle network;
- an enumerate devices function for returning a set of all physical devices detected on the physical vehicle network the last time the device detection function was called;
- a function for obtaining a physical address for the physical vehicle network;
- a function for obtaining an adaptor name for the physical vehicle network;
- a function for obtaining a baud rate for the physical vehicle network;
- a function responsive to a client request for returning the time of last operation for the device detection function;
- a function for obtaining a network class from a defined set of possible network classes;
- a function for returning the number of detected devices at the time of the last operation of the device detection function;
- a raw message traffic register function responsive to client requests to obtain messages corresponding to filtering criteria specified by the client in the function;

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a function for unregistering a prior registration for raw message traffic using the raw message traffic register function; and

a transmit raw message function responsive to client requests.

20.(currently amended): An application programming interface comprising:

a host computer on which the application programming interface is installed;

a hardware interface allowing attachment of the host computer to a motor vehicle network from a group including any vehicle class;

a software module for determining the motor vehicle network class;

a software module for registering the host computer as a client on the motor vehicle network;

a software module for detecting all active devices attached to the motor vehicle network; and

a software database including parameters for the detected devices accessible to the host computer.

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21.(currently amended): An application programming interface, for execution on a temporary client of one of a plurality of motor vehicle networks of diverse types, the application programming interface comprising:

a plurality of high level interfaces representing a common abstraction through models of a plurality of motor vehicle networks of diverse types from a group including any vehicle class;

a software database accessible through the high level interfaces specifying meaning for values transmitted to and obtained from physical devices attached to the motor vehicle network; and

a plurality of component object module functions completed by reference to the database.